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# HumRRO

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The General Concept of Managing for Educational Accountability

John E. Taylor and Robert G. Smith, Jr.

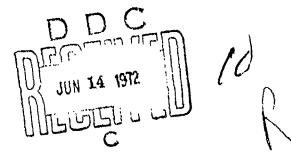
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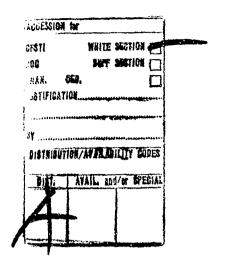
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### **Prefatory Note**

This paper is based upon a presentation made by Dr. Taylor at the Western Regional Research Coordinating Unit Directors Conference, Squaw Valley, California, September 1970. Dr. Taylor is a senior member of the staff of the Human Resources Research Organization (HumRRO), Division No. 3, Presidio of Monterey, California. Dr. Smith is the Director for Progra Development, Office of the President of HumRRO, Alexandria, Virginia.

# THE GENERAL CONCEPT OF MANAGING FOR EDUCATIONAL ACCOUNTABILITY

John E. Taylor and Robert G. Smith, Jr.

#### **CURRENT PROBLEMS IN EDUCATION**

Our educational system is today under heavy assault. We face widespread and persistent challenges. We are charged by the conservatives with waste and inefficiency and with extravagant spending on "frills." They say we are failing to transmit the values of a free society to our youth. Moderates are upset by student unrest, teacher strikes, and campus violence. Liberals accuse our schools of failing to meet the needs of society's disadvantaged—the poor, the blacks, the ethnic minorities.

All seem to agree that something has gone wrong and that remedial measures are needed. Congress and the state legislatures have responded to the public dismay by providing additional funds, but many people seem puzzled that educational problems persist.

We hear again and again that "the public schools have failed." Let us examine that statement.

Our huge, decentralized, and locally controled system of public education has helped to produce the world's most efficient, affluent, and technologically advanced society. It reaches more people (young and adult) than any other country's educational system. Unfortunately, however, the schools have not responded to the increased and changing expectations of a more mobile, impatient, and well-informed society.

It simply is not true that the schools have failed; rather it is more accurate to say that the burdens placed on those charged with delivering educational services now exceed the capabilities to meet those burdens. From this point of view, effectiveness being a ratio between burdens and capabilities, we must conclude that the system is overloaded and under strain.

#### THE ACCOUNTABILITY CONCEPT

An American goal has been that every child should have an adequate education. This goal has been expressed in terms of required attendance at school for a certain number of years—a requirement to be exposed to teachers, instructional processes, space, and equipment. But, when a child has failed to learn, school personnel have too often assigned him a label—"slow," "unmotivated," or "disadvantaged." In other words we have tended to hold the child accountable for his learning. Voices have recently been raised to stress the requirement for a new goal—that every child shall learn, and not merely be exposed to the school. A commitment such as this implies a willingness to change a system which has faults—to look for causes for failure in the system and its personnel instead of focusing only on students. In other words, "accountability" means to hold the school personnel accountable for "sults in terms of student learning and performance, rather than solely in terms of the use of resources. Such an accounting system will also be able to demonstrate clearly when schools have been successful, as well as when they have failed.

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The foregoing ideas have been advanced by the leading spokesman for educational accountability, Leon Lessinger, a former Associate Commissioner of the U.S. Office of Education (1969A, 1969B, 1970). In his writings, Lessinger has made four major points concerning accountability. First, he feels that the focus of emphasis in schools will shift from teaching to learning. Second, he believes that the schools will stop claiming credit simply for their ability to categorize people and send them either toward college or toward a kind of discard pile. Next, he states that the schools will begin to build a technology of instruction that will be based upon specific learning objectives. Finally, he expects that a rational relationship will be established between the cost and benefits of education.

Closely related to the concept of accountability is the procedure of performance contracting, in which a school system delegates part of its responsibility for instruction to an outside contractor. The contractor is then paid in accordance with his performance in teaching and in getting students to learn-hence, the phrase performance contracting. Another related term is the "turnkey concept," where the outside contractor must plan to turn over to the school system a complete and smoothly working system of

# PRECEDENTS OF ACCOUNTABILITY

Like most new concepts, accountability has its predecessors. In this case, these predecessors have been programed instruction, the systems concept applied to education and training, and the concept of a quality control system for education and training.

### **Programed Instruction**

If we view programed instruction as a process for developing effective learning, rather than a particular product such as a scrambled book, we find that the typical programed instruction project encompasses the following steps:

- (1) Preparation of a set of valid and clearly stated instructional objectives.
- (2) Development of a criterion test to measure the achievement of these objectives.
- (3) Development of a "program" in which the content required to obtain the objectives is imbedded in the appropriate media, and in which the appropriate principles
- (4) Testing and revision of the program until the students achieve the objectives satisfactorily.

The process of testing and revising the instructional materials until they generate effective learning on the part of students means that the program and the program director are held accountable for student learning. The student is not to be blamed if he does not learn from these materials; instead, the materials are to be revised until they are

## The Systems Concept

Another closely related predecessor of accountability is the concept of an instructional system. This is an integrated set of media, equipment, methods, and personnel performing efficiently the functions required to accomplish one or more objectives.

The systems concept clearly states that there must be objectives which the system is designed to accomplish and that there must be some way of telling whether the system is actually accomplishing its objectives. Thus, the system designer and the system managers will be held accountable for the success of the system in accomplishing its objectives.

The systems concept as it applies to education and training has been described by Smith (1966, 1971).

#### **Quality Control**

A third predecessor of accountability is the notion of establishing a quality control system for education and training. Such a system would, like its industrial parallels, measure the amount of learning the students have achieved, feed the results of the measurement process back to the instructional managers, then have the instructional managers continually improve the quality of instruction. Quality control systems have been described by Duffy and Colgan (1963), and by Smith (1965).

#### MANAGING ACCOUNTABILITY PROGRAMS

In presenting a summary of the requirements for establishing accountability programs, we will refer to relevant HumRRO reports.

#### **Instructional Objectives**

If we are to hold a school system and its supervisors accountable for results, we must be clear as to what results are expected. We must decide upon a clear set of objectives for the instructional process. An "objective" is a statement of the performance to be expected of the student upon the completion of instruction. Descriptions of ways to develop objectives can be found in Smith (1964), and in Ammerman and Melching (1966). A more recent discussion of objectives will be found in Smith (1971).

#### Performance Evaluation

In order to determine whether the students have attained the objectives established for them, tests must be administered. The tests suitable for use in an accountability program are called "criterion-referenced tests." These tests are designed in such a way that if a student has attained the objectives, he passes the test; if not, he fails the test. They are scored on a pass-fail, go/no-go basis.

Tests that are based on the performance of the average individual, or tests that are graded in terms of "grade levels," are not satisfactory measures to use to evaluate whether objectives have been obtained by individual students.

In addition to tests, other measures may be useful in evaluating the effects of instructional programs. For example, if we are concerned with vocational education, we may wish to measure the number of students who enter a given job within a specified time, or the number of students who remain in those jobs after a certain time period.

An instructional program cannot possibly be considered successful unless it holds its students. Therefore, comparing the number of students who stay in the program with those who drop out, will provide useful data.

Extensive discussions of the proper methods of testing for accountability may be found in Smith (1965, 1971).

#### Feedback

After the tests have been administered and scored, it is necessary to analyze the results and to make them available to the school personnel so that they may take the necessary steps to improve the instructional processes. Analysis and feedback should be performed in such a fine-grained fashion that those parts of the school system that are successful and those that are less successful can be determined. Care should be exercised

to develop a feedback system that will lay the basis for improvement in instruction, rather than develop fear on the part of the school staff that they will be punished if they appear to be performing in a less satisfactory manner than other parts of the school system.

#### **Corrective Action**

After the results have been provided to the instructional staff, it is necessary that the staff take appropriate action to improve instruction that has been found less than satisfactory. If an accountability system is to be a meaningful process, the test results must not simply "gather dust"—they must form the basis for continued improvement in the instruction.

#### Supervisory Support

It is vitally necessary to secure the active and willing cooperation of supervisory personnel at all levels if an accountability system is going to function. Support must be given to the processes of diagnosis and improvement of instruction throughout the supervisory chain. Further, the program must be administered in a way that is convincing with regard to the intention to use test results to improve instruction, rather than to punish and threaten.

#### Staff Training

One of the surest ways to make an innovation fail is to omit the work involved in training all people who are expected to participate. It is vitally necessary to provide training in the various aspects of accountability so that each person in the school system can perform his various duties appropriately.

For example, HumRRO has developed a work shop that teaches teachers how to develop their own instructional objectives, how to group these objectives into mastery modules so that students may be tested at the end of each module, and how to apply principles of behavior modification in the classroom. This program has been successful in changing the behavior of teachers (Melching, Frederickson, and Whitmore, 1970).

#### **Performance Contracting**

Performance contracting is a variation on accountability in which an outside contractor is held accountable for teaching. Normally, the contractor obtains an especially high payment if most of the students learn, along with a penalty for each student who does not meet the course objectives.

There are a variety of points that need to be considered in requests for proposals (RFP) and in dealing with contractors. In arranging for requests for proposals, it is necessary for the school system to decide and to state clearly and in detail educational services that will be provided by the contractor. The method of payment should be specified, to include such matters as whether there is a fixed fee, whether bonuses will be provided, whether penalties will be accessed for students who do not learn or who do not complete the course of instruction. The students who will be the subjects of the performance contracting project should be described in complete detail.

The RFP should also describe the way in which the project will operate in connection with the school. Considerations include—whether the contractor will be required to work within the school curriculum, having students out of class for so many hours per day; whether the contractor must utilize members of the school system; whether local citizens should be hired as assistants; and whether specific materials and equipment must be used.

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A clear statement of the standards of performance to which the contractor will be held accountable must be provided. This should include the method by which the contractor will be paid when students do or do not meet the standards of performance, as well as how to deal with the problems of drop-outs. Will the school be responsible for delivering students to the contractor?

Finally, in the RFP it will be helpful to provide a specific format so that each bidder prepares his bid in the same way, making it easier to compare bids.

An important aspect of an RFP will be a requirement that the bidder present a plan for turning his project over to the school for operation if it proves to be a successful means of instruction.

In planning for performance contracting it is also desirable to arrange for an outside objective group to serve as an auditor to determine when the contractor has met the conditions of his contract. Such an auditor should be a person or an organization that has no vested interest in any particular textbook, instructional programs, or equipment. A nonprofit organization with extensive experience in research and evaluation would seem to have special qualifications to serve as an auditor.

#### **Public Relations**

In any new instructional program there will be many groups who will be interested in the project. The public needs to be kept informed so that rumors and false information will not develop. Teachers will need to be informed so that they will not feel unduly threatened by the accountability aspects of the project. Many groups have a potential for either assisting or interfering with an accountability project. Accordingly, it is wise to bring school public relations specialists into the early planning of such a project and to make sure that full information is made available to all interested groups.

An especially important aspect of public relations and public acceptance is to make sure there is a full and complete understanding and acceptance of the specific behavioral objectives that will be the goals of the project.

#### SUMMARY

This paper has provided an overview of the principal factors that need to be considered in developing an accountability project. It has described the principal ideas behind the concept of accountability, described some of the predecessor concepts to accountability, and provided references to reports and publications that may be helpful for further study of the concept.

#### LITERATURE CITED

- Duffy, John O., and Colgan, Carroll M. A System of Flight Training Quality Control and Its Application to Helicopter Training, HumRRO Consulting Report, June 1963.
- Lessinger, Leon M. "After Texarkana, What?" Nation's Schools, December 1969A.
- Lessinger, Leon M. "The General Concept of Independent Accomplishment Auditing," presentation to the Institute on Educational Accomplishment Auditing, Newport Beach, California, November 1969B.
- Lessinger, Leon M. "Four Key Ideas to Strengthen Public Education," Journal of Secondary Education, vol. 45, no. 4, April 1970.
- Melching, William H., Frederickson, Edward W., and Whitmore, Paul G. Introducing Innovation in Instruction: In-Service Teacher Workshops in Classroom Management, HumRRO Technical Report 70-104, November 1970.
- Smith, Robert G., Jr. The Development of Training Objectives, HumRRO Research Bulletin 11, June 1964.
- Smith, Robert G., Jr. Controlling the Quality of Training, HumRRO Technical Report 65-6, June 1965.
- Smith, Robert G., Jr. The Design of Instructional Systems, HumRRO Technical Report 66-18, November 1966.
- Smith, Robert G., Jr. The Engineering of Educational and Training Systems, D.C. Heath, Lexington, Mass., 1971.